Unwelcome Aliens

By L.R. Schlueter

Aquatic nuisance species are a threat to North Dakota's waters and wetlands.

Each year new ANS infested sites are found. Each year new species are added to the ANS list. As ANS problems in the United States increase, so does the potential for these troubles to become established in North Dakota.

Purple loosestrife, while attractive to the eye, is an aggressive, exotic plant that crowds out native plants found in North Dakota.

Craig Bihrle

Curly leaf pondweed, an exotic plant that out-competes native aquatic vegetation by growing earlier in the season, is now common in much of Lake Sakakawea and in the Missouri River downstream of Garrison Dam. Ten years ago, this plant was found in only a couple of sites in North Dakota.

Saltcedar, an invasive water hog, was first found in the upper Missouri River and the upper end of Sakakawea about three years ago, but now the plant is growing along much of the reservoir, and may have taken root downstream. (See related story on saltcedar on page 8 of this issue). Purple loosestrife was seen in only a few spots in the mid-1980s, but now has expanded to the Sheyenne, Red and Mouse river drainages, and other areas in the state.

The list goes on … and grows.

In the upper reaches of the Yellowstone River in Montana, the New Zealand brown mud snail has taken hold. Scientists fear this small bottom feeder, which diverts energy from going up the food pyramid to, say, walleye, could make its way to Sakakawea and make a home in the huge reservoir.

Aquatic nuisance species modify native habitat, be it in water or on land. These exotic plants and animals fill niches occupied by desirable and native species, and compete for limited food supplies.

When aquatic nuisance fish species become established, some may suggest to stock large numbers of small, desirable fish to overcome the problems of poor habitat. This, however, is not going to solve the problem of competition for food and a vacant niche for the stocked fish.

ANS infestations mean reduced recreation – fewer fish to catch, fewer ducks to hunt, and a drop in pleasure boating. Outdoor enthusiasts should be concerned about ANS, and help prevent the spread of these aquatic enemies by taking simple preventative measures.

With North Dakota's many recreational opportunities, anglers, hunters and boaters – both resident and tourist – are looking for new waters and are willing to travel long distances to find them. The problem is, recreationists are sometimes not traveling alone. Aquatic nuisance species are hitchhikers – riding to new locations on hunting, fishing and scuba gear or on a boat or trailer – and are unknowingly spread to new locations.

ANS are difficult to control once established, and expensive to fight. In the last 10 years, Minnesota, for example, has spent about $1 million per year to slow, but not entirely eliminate, the spread of these aliens. A hidden cost, however, is the manpower diverted from the management of desirable species to fight ANS.

Aquatic nuisance fish species can reduce the number of desirable fish such as walleye, yellow perch and trout. Ruffe, a small exotic fish, are known to displace bullheads. Yes, even tough bullheads can be displaced by this small spiny-finned fish.

Native plants found along or in waters can be replaced by a single aquatic nuisance plant species, shifting the natural plant diversity to a monoculture of exotics. Waterfowl and other wildlife populations – animals not adapted to these unfamiliar plants – decline when ANS plants dominate wetlands and other waters.

North Dakota has only a few isolated ANS infestations, and the hope is that they are not spread to other areas; or brought into North Dakota by residents returning from out-of-state fishing trips or nonresidents coming into our state.

ANS infestations can be prevented by not giving those unwanted hitchhikers a ride. The best way to prevent ANS from riding on equipment between waters is to keep things clean. Washing gear, a simple effort that takes only a few minutes, can prevent ANS infestations in North Dakota lakes – including your favorite fishing hole.

L.R. SCHLUETER is a special projects biologist with the Game and Fish Department's fisheries division.

Guidelines to help ensure that aquatic nuisance species are not introduced to your favorite waters:

• Remove plant fragments from a boat or personal watercraft and its water intake and trailer. Do the same with fishing, hunting or scuba gear when leaving the water.

• Drain water from boat motor, livewell, bilge, and behind the transom before leaving the water.

• Power wash boat and trailer.

• Clean and disinfect all fishing tackle, hunting or scuba gear or other equipment after use.

• Disinfect boat, livewell and bilge by power wash, using water 104° F or warmer. Rinse with a bleach solution – one part chlorine bleach to 20 parts warm water. The same can be done to fishing, hunting or scuba gear.

• Do not release bait or bait water into a lake, or move fish from one lake to another. Put excess bait in a fish grinder, garbage or bury at home. Return fish to the lake they came from.

• Remember: Lose the hitchhikers or lose the lake. It's your choice.

Fish species of concern – carp, ruffe, goby and rudd:

Exotic fish species out-compete native fish or established fish populations. These new fish species modify aquatic habitats by eating plants or food items needed by desirable fish. When these exotics invade a lake, the recreational fishery can quickly deteriorate. To prevent ANS infestations, use only "clean" bait, do not dump bait in a lake and do not stock fish into waters. Some anglers illegally stock fish with hopes of improving the fishery, but this only creates more problems.

Aquatic plant species of concern – Eurasian water milfoil and curly leaf pondweed:

Both plant species grow under the water's surface; form thick mats that make boating difficult; provide too much cover which leads to stunted fish populations; and dying plants can cause a dissolved oxygen sag in the fall.

Minnesota Sea Grant

Water milfoil grows under the water's surface and forms thick mats that makes boating difficult. A single plant fragment hitchhiking on, say, a boat trailer, can create a new population in a new area.

Plants can be spread by individual seeds or seed pods hidden in mud, in water or as fragments entangled on trailers, boat props or equipment. A single plant fragment can create a new population in a new area.

Terrestrial plants of concern – purple loosestrife and saltcedar:

These aggressive plants grow along shorelines or in shallow water and form thick stands that crowd out native plants. Loss of native riparian plants has a negative affect on aquatic resources and wildlife, and habitat modification creates problems for the fishery.

The plants produce thousands of small seeds that drift around the lake and wash up on shore. People and pets move the seeds in mud they pick up, or the seeds get into boats and on equipment. Vegetative material can lodge on the boat or trailer and be moved to a new area to start a new infestation.

Invertebrates of concern – zebra mussels and spiny water fleas:

These invertebrates out-compete desirable zooplankton for food and living space. They eat food items used by desirable fish, which reduces the number of small game fish.

These creatures hitchhike on equipment, in boats, or on trailers. They can live for a long time in a damp livewell or in bilge water. When these creatures are released into a lake, they will survive. They reproduce in large numbers and can quickly take over.

Minnesota Sea Grant

Zebra mussels reproduce in large numbers and can quickly take over. This mussel eats food items used by desirable fish, thus reducing the number of game fish in fishing waters.

License to Help

Sportsmen can help combat noxious weeds that threaten wildlife habitat in North Dakota by reporting sightings of purple loosestrife and saltcedar.

To help hunters and anglers properly identify these nuisance species, license holders with pictures of loosestrife and saltcedar will be given to sportsmen when they buy their hunting and fishing licenses from North Dakota Game and Fish Department offices.

The envelopes are courtesy of the U.S. Fish and Wildlife Service and North Dakota Department of Agriculture, and distributed by Game and Fish.

Sportsmen are instructed on the envelope to call their local weed control officer or the Department of Agriculture noxious weed section at 800-242-7535 when loosestrife or saltcedar are spotted.